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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,915	10/19/2000	Hermann Bieringer	514413-3843	7663

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EXAMINER

CLARDY, S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 12/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/691,915

Applicant(s)
Bieringer et al

Examiner
S. Mark Clardy

Art Unit
1616



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 15, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18, and 19 is/are pending in the application.
- 4a) Of the above, claim(s) 6, 7, and 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9, 14-16, 18, and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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Claims 1-16, 18, and 19 are pending; claims 6, 7, and 10-13 have been held withdrawn

Applicants' claims are drawn to herbicidal compositions and methods comprising:

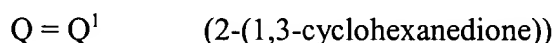
- A. A herbicide with various (hetero)cyclic groups pendant from a carbonyl group (I)



- B. A second herbicidal component (see lists in claims 6-13).

Applicant's elected species comprises the following combination of active agents:

- A. The triketone herbicide, Compound "A4" (p. 26)¹, wherein:



- B. The "B-b" group sulfonylurea herbicide, nicosulfuron (not used in the examples).

In the biological examples (p. 26-29), all of the A components are triketones; the elected B component was not used in testing although two other sulfonylureas were used: B1 and B4 (=iodosulfuron), both nonelected, and apparently "B-a" group, sulfonylureas.

Again, examination has been based on the combination of triketone herbicides ($Q^1\text{-CO-X}^1$) in synergistic combination with sulfonylurea herbicides in the "B-b" group of claim 8². No test data has been provided for this combination. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If

¹This compound differs from the triketone herbicide sulcotrione in having $-\text{CH}_2\text{-O-CH}_2\text{-CF}_3$ at the 3-position of the benzoyl ring.

²Halosulfuron, iodosulfuron, nicosulfuron, primisulfuron, prosulfuron, rimsulfuron, thifensulfuron, tritosulfuron.

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claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

In view of applicants response concerning the absence of the specific elected triketone herbicide in the cited references in the previous obviousness rejection, and upon further review of the specification, the following rejection under 35 USC 112, first paragraph, must now be made.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5, 8, 9, 14-16, 18, and 19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The triketone herbicides had previously been taken as obvious variants which were known in the art as suggested in the specification (page 1, lines 16-25). Applicants appear to argue in response to the previous office action, however, that such is not the case. Upon further review of the specification, it is also noted that there is no disclosure of how to make the elected A component, nor is there any explicit disclosure for where it may be obtained.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-5, 8, 9, 14-16, 18, and 19 are again rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Lee et al³, De Gennaro et al (US 6,046,134), and Nippon Soda (JP 4-230301, see Abstract identified as "XP-002171353"). The rejection is maintained based on the earlier assumption that the triketone herbicides are obvious variants of each other.

Lee et al, again, teach that the class of triketone herbicides was known to exert herbicidal activity by inhibiting *p*-hydroxyphenylpyruvate dioxygenase. All of applicant's exemplified A component herbicides are triketones.

De Gennaro et al, again, teach the synergistic combination of a triketone herbicide with various sulfonylureas, including nicosulfuron (compound IIa, column 2).

Nippon Soda, again, teaches the synergistic combination of triketone herbicides with various secondary herbicides including nicosulfuron (Abstract).

One of ordinary skill in the art would be motivated to combine these references because they disclose the utility of combining triketone herbicides, shown to function by inhibiting a single enzymatic pathway (Lee et al), with additional herbicidal agents.

Thus it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have combined triketone herbicides with sulfonylurea herbicides because each class of herbicides was known and it is *prima facie* obvious to combine herbicidal agents⁴.

³Lee et al. "The Structure-Activity Relationships of the Triketone Class of HPPD Herbicides". *Pesticide Science*. 54:377-384. 1998.

⁴It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 205 USPQ 1069.

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Further the prior art specifically teaches the synergistic combination of triketone herbicides with other herbicides such as sulfonylurea herbicides (i.e., nicosulfuron).

The test data for the elected species presented in the response filed October 15, 2002, demonstrates synergistic activity for the elected composition. However, De Gennaro et al, discussed above, appears to at least suggest that the combination of triketones and sulfonylurea herbicides such as nicosulfuron would be expected to be synergistic. A comparison with the species comprising the triketone of De Gennaro et al would appear to be in order, to determine whether the compositions herein exhibit unexpectedly superior synergistic results in comparison with the synergistic composition of De Gennaro et al.

Should the above rejections be overcome with respect to the elected species, the subject matter of claim 19 will be allowable over the cited prior art upon receipt of the forthcoming Declaration formalizing the results presented in the response filed October 15, 2002.

It is noted that the data presented to date is incommensurate with the scope of the claims. Objective evidence of nonobviousness must be commensurate in scope with the scope of the claims. In re Tiffin, 171 USPQ 294.

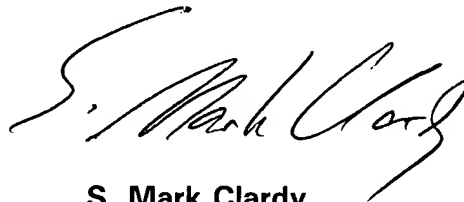
No unobvious or unexpected results are noted; no claim is allowed.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103c and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is (703) 308-4550.

A handwritten signature in black ink, appearing to read "S. Mark Clardy", is positioned above the printed name and title.

S. Mark Clardy
Primary Examiner
AU 1616

December 19, 2002